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## Finding out how people prioritise their food security problems in Chad: the challenge of RRA at national level

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### • Introduction

This paper reports on an informal survey in Chad, using RRA techniques to try and understand how people perceive and prioritise their food security problems. The survey was part of the FAO assistance for the development of a National Food Security Programme (NFSP) in Chad.<sup>1</sup> In the true nature of the informal survey approach, it was probably the first time that questions of this kind were posed in a survey with national coverage. Most examples of RRA/PRA are concerned with micro-level studies, usually at the community level. A frequent question is whether RRA/PRA can be useful when information is needed on a larger scale, for example at regional or national level. Our experience in Chad shows that scaling up presents its own challenges, and tests certain RRA techniques close to their limit. It seems most appropriate as a way of collecting qualitative information on local people's perceptions to be fed into national planning processes, which may challenge the conventional wisdom and open new lines of enquiry. The survey design and methodology for this exercise in Chad drew on experiences of food security surveys carried out at sub-

<sup>1</sup> A full account of the survey approach and the results can be found in the BIEP/FAO report, *Comment les Tchadiens Perçoivent Leurs Problèmes de Sécurité Alimentaire*. An earlier version of this paper was presented to a seminar at IDS on 30th January 1992. The paper has benefited from the comments and discussion provided by IDS colleagues at that seminar, and from the comments of Chadian and FAO colleagues involved in the National Food Security programming process.

national level in Darfur, Sudan, based on semi-structured key informant interviews (Buchanan-Smith and Young, 1990). It also drew on a 'Rapid Food Security Assessment' exercise which had been piloted at the national level in Sudan (Maxwell, 1989) as well as on well developed RRA and PRA techniques (McCracken et al, 1988). The survey was carried out between June and September 1991.

### Background: the national food security programme in Chad

Following the famines in Africa in 1984/85, FAO agreed to support pilot exercises in national food security programming in Chad, Niger, Tanzania, and Zambia. Three concepts formed the food security planning approach:

- the **availability** of staple foods;
- the **stability** of supply of staple foods; and,
- **access** of consumers to staple foods.

In each of the countries some variations were made in how the programmes have been implemented. For example, only in Chad and Niger have national level surveys been launched to try and understand how people perceive their food security problems themselves and the solutions they propose. The final output of each of these national programming exercises is intended to be a range of alternative, and costed, strategies to achieve food security, from which national government can select its own policy options.

National food security planning in Chad has been hampered by a lack of reliable statistical data at national level (although several micro-level studies have been carried out and

considerable local level experience exists of food security problems and of various interventions, particularly amongst NGOs).

So far, the process of programming and consultation had mostly taken place in the capital, amongst government staff. There had been very little consultation at the grassroots level. It was agreed that a nationwide survey should be launched to find out how people perceive the food security problems they are faced with in their daily lives, and the solutions they seek. The scale of the survey was ambitious and the time available was limited, as the survey was to feed into a national planning process that was already underway.

## • **Survey design**

### **Informal, qualitative survey approach**

An informal survey approach was chosen for a number of reasons. Firstly, the survey was intended to be as participatory as possible. Secondly it was to be carried out in about three months with limited resources, with a team of about 13 survey enumerators (female enumerators were recruited locally to ensure there was at least one woman in each team). A formal survey based on statistical sampling would have been impossible with such limited resources on that timescale. Thirdly, it was agreed from an early stage that the results would be mainly in qualitative form. The formal survey does not lend itself to this kind of output.

## **Coverage and case studies**

There are 14 préfectures in Chad, all to be included in the survey. (In the end two were omitted, partly because of logistical difficulties). Within each préfecture, the survey was designed according to the principal production systems to ensure some generalisation of the food security problems and solutions raised. During 'scene-setting' meetings with the local authorities in each préfecture, the principal production systems were identified, and a 'representative' village purposively selected for each production system. The survey was then carried out according to a case study approach based on each of these villages - 55 in all.

## **The semi-structured interview**

The team spent about one day in each village, carrying out semi-structured interviews at two different levels. The group interview was designed to be as open as possible to permit the follow-up of any relevant points, yet was guided by a checklist of questions to ensure some degree of standardisation (see Table 1). The interview or discussion was about general conditions in the village. Several interviews at the household level were then carried out, on the same basis, to check the information gathered in the group. Household interviews were particularly oriented towards women in the village, as they were rarely represented in the group. The views of women were most successfully recorded where there was a female enumerator who could talk to the women in private, in their own homes, whilst the group interview with the men was going on.

**Table 1. Example of villagers' prioritisation of food security problems: Quaddai and Biltin Prefectures**

Problem	No. of villages raising problem	% of villages	Overall priority	Solutions proposed
1. Famine/decline in cereal production	6 out of 12 (as problem no.1) 5 out of 12	50% 42%	1	Short-term food aid; long term , development of market gardening and improved means of production (see below)
2. Pest damage to crops	5 out of 12	42%	1	Improved plant protection services (DPV); traditional plant protection methods
3. Lack of water points for livestock	1 out of 12	8%	1	Construction of more water points, especially in north
4. Lack of access to improved means of production	8 out of 12	67%	2	Agricultural credit; improved fruit and vegetable seeds; small dam construction for flood retreat cultivation; extension of the 'houe occidental' motor pumps
5. Lack of drinking water	6 out of 12	50%	2	Construction of new wells; preference for open wells; improved borehold maintenance systems
6. Lack of primary health care facilities	8 out of 12	67%	3	Village dispensaries
7. Lack of cereal seed	4 out of 12	33%	3	Distribution of cereal seed by ONDR
8. Inadequate road infrastructure	3 out of 12	25%	3	Road construction (especially feeder roads)
9. Constrains to marketing fruit and vegetables	3 out of 12	25%	3	Formation of producer marketing cooperatives with own means of transport
10. Lack of veterinary services	2 out of 12	17%	3	Mobile veterinary teams
11. Lack of extension services	2 out of 12	17%	3	Assistance with creation of village cooperatives (by ONDR); more ONDR extension agents
12. Instability of cereal markets	1 out of 12	8%	3	ONC abandon role as 'market stabiliser'

**Table 2. Format for recording villagers' prioritisation of food security problems and solutions**

PRINCIPAUX PROBELMES DE LA SECURITE ALIMENTAIRE ET LES SOLUTIONS POSSIBLES				
Village:	Prefecture:	Principal systeme de production:	SOLUTIONS POSSIBLE	
PROBLEMES (lister par theme et par ordre d'importance)	CAUSES	STRATEGIES D'ADAPTION EMPLOYEEES	Villageois	Equipe BIEP

A wide range of subjects was covered, partly to gather background information on food security conditions and status, and partly reflecting the huge scope of issues which are relevant to food security. Topics discussed included population, details of the village economy, food consumption patterns, and health and water facilities. At the end of the interview, the villagers were asked to prioritise the problems pertaining to food security which had emerged during the discussion, wherever possible to explain their current coping strategies, and to propose the solutions they regarded as most appropriate (see Table 2 for an example of the summary table used to record the problems and solutions). To cover inter-annual variation, three years of different weather conditions were used as reference points for triangulation during the interviews: 1987 as an example of an average year for rainfall in the country, 1988 as an example of a good year for rainfall, and 1990 for low rainfall conditions. The assumption being made is that food security status in general is closely related to annual cereal production, in turn determined mainly by the level and distribution of rainfall.

At the end of the village visit, the survey team regrouped for a 'brainstorming' session to discuss their findings, on the basis of which a short village case study was prepared. Partly because of lack of time, there was unfortunately no feedback from the team to the village about what they thought they had learnt, and their conclusions.

### **The survey in towns**

The survey was also carried out in several towns, with a modified approach. In a preliminary meeting with the town authorities, different groups in the urban population were identified. Several households from each group were then interviewed individually (group interviews were not possible in the urban context), using a slightly different checklist of questions. The same ranking exercise of food security problems and solutions was carried out.

### **Training of the survey team**

Most of the enumerators were from the *Bureau Inter-ministerial d'Etudes et de Projets* (BIEP)

in N'djamena. They had been involved in earlier stages of planning for the NFSP, and were very experienced in formal survey work. But this was their first introduction to RRA/PRA and to informal survey methods. Training was initially classroom based, to introduce the concepts, approach and reasons for RRA/PRA. A French translation of some of the key IIED materials proved invaluable for this, and for the English-speaking trainer to become acquainted with the terminology in French. The group drew up the first draft of the checklist of questions together.

This was followed by training in the field. Villages close to N'djamena representing different production systems were selected. Training in quite large groups of enumerators was carried out, by going through the whole process of group and household interviews, brainstorming and writing up. Only at this point did the whole approach begin to make sense to some of the more sceptical enumerators who were strongly rooted in more formal and structured survey traditions. During the village training, the checklist of questions was modified, again as a group effort.

The main problems was lack of time, especially in the field, which meant that some potentially useful techniques during the group interview, like seasonal calendars, were never properly incorporated. They were regarded with some scepticism by the survey team. The main transition which was successfully made during the training was from the structured questionnaire to the semi-structured group interview, introducing ranking techniques. It would have taken longer for diagrammatic and visual techniques to be fully incorporated, although these could have been extremely valuable.

### **Analysing the results**

In the first stage of analysis, the enumerators prepared the village case studies using a standardised format, to organise all the qualitative information they had collected in the different interviews. An enormous bundle of over 40 written, and quite detailed, case studies was the result (some villages were grouped together in this first round of analysis).

The final analysis required the assimilation of all this material into a form useful for national planning. Key to this process were several long meetings with each team of enumerators to discuss the results and to ensure that the knowledge and experience they had gained during the survey were fully incorporated. Another key to facilitating the organisation of this huge and unwieldy amount of data was using techniques to summarise information concisely and sometimes visually. Seasonal calendars were constructed for each préfecture (attempts to use seasonal calendars during the interviews having failed as described above). Tables summarised the frequency with which different problems and solutions were raised, and how they were prioritised by the villagers. In Table 1, the frequency with which a problem has been raised is expressed in terms of the number and percentage of villages identifying the issue. According to where the problem occurred on the villagers' list of priorities, the average position during ranking has been calculated for the group of villages considered in each table, according to a simple scale and scoring system. If the average is less than 2, the problem has been ranked priority number '1', if less than 3, it has been ranked priority number '2', and if 3 or more, then priority number '3'.

The large amount of background information collected on the rural economy, recent changes, food security status and coping strategies was written up to place this prioritisation of food security problems in context. Villages in préfectures were grouped together into five zones: the Sudanian zone, four groups of préfectures with complementary production systems in the Sahelian zone, and Chari-Baguirmi as the largest and most diverse préfecture alone.

The analysis has been based on a process of reductionism as the information has been progressively summarised at each stage. This does not do justice to the complexity of food security issues expressed by the local people, but is an inevitable consequence of organising the information for use at national level.

### • **What we found out**

Despite the diversity of livelihood systems and agro-ecological zones, some common themes

emerged. First of all, many rural people were preoccupied with the decline in the traditional components of their livelihood systems, especially during the last decade. The 1980s have been difficult with war, severe drought and a rinderpest epidemic. The overall impact seems to have been greater emphasis on staple crop production. For example, pastoralists who have lost most of their herds, especially in the north, have become settled cultivators. Fishermen facing declining fish catches are spending more and more time in cereal crop production as a source of food and to replace lost income. Dissatisfaction with existing water facilities and with primary health care services also emerged as a very widespread concern over the whole country, commonly as problem number 2 or 3.

The results have challenged some conventional thinking in N'djamena about rural development priorities. The key is widely believed by donors and government to be developing and promoting free market systems for agricultural produce, which will in turn release the production potential. The villagers have articulated their difficulties rather differently. They have given highest priority to their agricultural production problems, very often related to staple crops, and marketing problems have occurred much further down their list. The overwhelming evidence is that rural people are aware of simple methods and technologies to increase their production, but they are frustrated in their attempts to do so because of lack of availability of those technologies and especially lack of means to acquire them. Thus, there was a very widespread demand for credit, for example for ploughs and oxen for animal traction, for improved fruit and vegetable seeds, and for more efficient means of irrigation of *wadi* soils. The implications are for a twin tracked approach to development: developing agricultural marketing systems and production.

In summary, three categories of préfectures have been identified:

- where the primary objective of households is to expand/diversify staple cereal production through improved means of production, both for their own consumption and sometimes as a cash crop. Unexploited potential has been identified:

- where households are preoccupied with protecting their existing staple crops (for example against drought and pests) - their overriding aim is damage limitation, especially in the north of the Sahelian zone; and,
- where households place greatest emphasis on increasing production of non cereal cash crops like fruit and vegetables, especially in the east in *wadi* villages where dune agriculture is highly variable.

## • **Comments on methodology**

### **Advantages**

With limited time and availability of resources, an RRA/PRA approach permitted a survey of this scale to be carried out with very wide geographical coverage. Only this kind of informal survey approach could have enabled people's views to be incorporated into a national level planning process. This represents a very important, and quite unusual attempt to consult local people when formulating a national programme. Some of the results which have challenged commonly held viewpoints are evidence of the significance of this exercise. It has provided concrete suggestions to discussions that have been going on in the national capital about strategies to promote food security, which stuck at a rather general level, and lacked the necessary detail to be translated into action.

### **Practical problems and trying to overcome them**

Some practical problems were encountered, although not all are exclusively associated with an informal survey methodology.

Enumerator bias influenced how villages identified and described their problems relating to food security, for example according to how questions were posed and the language the enumerators used. This also affected how the problems were relayed in the case studies. Meetings with the enumerators helped to identify and compensate for their bias, especially in how they had interpreted information gathered during the village visits, and how they had written it up. Some group discussions were reconstructed to tease out the

different possible interpretations, and recall points raised by the villagers which the enumerators had not written down because they were too obvious, or seemed unimportant. It was most difficult to compensate for enumerator bias in terms of how questions were asked at village level.

Most of the enumerators were government employees, which influenced the kinds of responses the villagers, gave, particularly the solutions they proposed, many of which were orientated towards state intervention. There were relatively few ideas on community-based interventions. It is very hard to see how this particular problem could be overcome, without spending much more time in the villages.

With hindsight, training of the enumerators could usefully have been longer, and more village-based, in particular to try and make better use of visual and diagrammatic PRA techniques.

Carrying out the survey during a drought year when many people were facing urgent and immediate food problems, and a relief operation was underway, undoubtedly biased the results towards short term crisis problems. This often prompted the demand for immediate relief food aid (although people's vulnerability to food insecurity was easier to assess in such conditions).

Coverage of transhumant pastoralists was scanty - locating these groups was difficult because the timing of the survey coincided with their seasonal migration.

Triangulation using three different years of rainfall was useful, although there was sometimes confusion because the years selected were not consecutive (1987, 1988 and 1990).

Analysis of a huge amount of qualitative information was an enormous and sometimes overwhelming task. It was difficult in advance to anticipate how much information would be gathered, or to impose too rigid a ceiling on the length of the village case studies prepared by the enumerators for fear of losing valuable information. Constant summarising and ranking were required to bring it under control. It seemed most useful to do this in stages: firstly, asking the villages to rank and

prioritise their food security problems; secondly, asking the enumerators to rank and summarise information into pre-determined tables and diagrams; and in the final stage of analysis summarising and ranking once again at the most aggregated level by zones of villages. However, there were always more detailed notes supporting each process of summation which were very important to refer back to when necessary. Despite wanting to have the process of analysis sewn up from the start, it was important to be flexible and open-ended, leaving some decisions about how the information should be analysed until the final writing up. It was clearer then what kind of information it had been possible to amass, although this meant extra stress at the end.

### Disadvantages

Most of the disadvantages are associated with the large scale of the survey. The villagers were being asked to prioritise the main difficulties they faced with respect to food security usually during a single meeting. As there was no opportunity to discuss issues or interventions in depth the results were sometimes superficial (this compares with, say, the lengthy process of consultation which normally precedes the setting up of a new development project).

It was likewise hard to differentiate between different socio-economic groups, especially between rich and poor households, except at a very general level.

The huge scope of issues relevant to 'food security' led to wide-ranging discussions and problems.

### Conclusions

This exercise represents a new dimension to national food security planning by trying to incorporate local people's views explicitly. Certain lessons have been learnt from this first attempt:

- Very similar results emerged from villages in the same agro-ecological areas. This implied that fewer villages could have been selected, and more time spent in each village which would have given more detailed and satisfactory results.

- Especially if fewer villages were surveyed, wealth ranking could be used to differentiate socio-economic groups in the village. This could be very important to know how the prioritisation of food security problems differs between groups. Similarly, more attention could be paid to how prioritisation of problems differs between men and women.
- RRA/PRA techniques and approaches have been developed for micro-level studies, working from the grassroots. Wherever possible, this kind of survey should be carried out consistently in that manner. For example, rather than sending out enumerators from the national capital, ideally an approach should be built up from district or préfecture, to national level. This would involve local government staff who are most likely to be the ones directly responsible for implementing some of the interventions planned as a result of the survey. However, there is still a strong argument for also involving central government planners, who are involved in the process of national level planning.
- Tapping the expertise of local development workers is always a challenge in a rapid exercise of this kind. There is a better chance of doing so, however, with a decentralised approach to the survey design and to implementing it as recommended in (3) above. Efforts should be made to involve knowledgeable and experienced NGO staff at local level throughout the exercise, particularly to calibrate the results.

There is always a danger that the RRA/PRA bandwagon can run out of control, being used to justify very rapid surveys whose results are given credibility beyond what the methodology dictates. 'Exploratory RRA' approaches were originally promoted as alternatives to lengthy and costly formal surveys, to provide some initial results quickly, which could then be followed up with more detailed work, which is better focussed as a result of the preliminary exercise (McCracken et al, 1988). The survey in Chad has produced some illuminating findings quite cheaply and very rapidly. But it has also raised a lot of questions which deserve much more

detailed study: for example, why wasn't livestock restocking identified as a priority issue in areas where pastoralists have lost their herds, or land tenure a problem where there is known to be very limited cultivable land? At some point during the planning process these questions and clarifications have to be followed up with more detailed and in-depth investigations as the results are translated into policy and interventions.

There is important follow-up work to be done, testing the accuracy of the results of a rapid survey of this kind with more in-depth village level work in some of the same sample villages. A 'food security' study poses special challenges because of the very wide range of subjects and topics that have to be covered. Much more work is still required to try and refine and develop RRA/PRA techniques to these special needs of a food security survey.

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#### NOTES

Margaret Buchanan-Smith is from the Institute of Development Studies. The other authors are the survey team from the Bureau Inter-ministerial d'Etudes et de Projets (BIEP) in N'djamena. François Rivière and Ulrich Kleih are part of an FAO project of technical assistance to BIEP.

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